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**FIGHT
FOR
SIGHT**
EYE RESEARCH

news autumn 08

News for Fight for Sight supporters – Edition 06

Tackling blindness in Africa

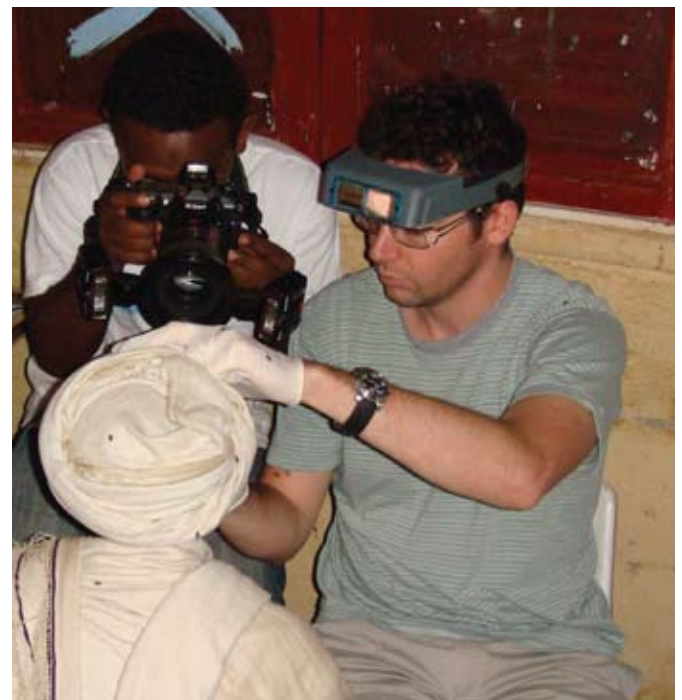
Dr Matthew Burton and Professor Clare Gilbert of the London School of Hygiene & Tropical Medicine are developing better treatments for trachoma, one of the world's leading causes of blindness. Fight for Sight is funding the project in Ethiopia thanks to a £370K grant from Band Aid.

A global tragedy

The World Health Organization estimates that 84 million people worldwide have active trachoma infection and about 8 million are blind or severely visually impaired.

Trachoma is a disease of poverty with devastating consequences

Trachoma is triggered by infection with *Chlamydia trachomatis*, leading to repeated



Dr Saul Rajak and Tariku Wondi examining and photographing eyes before surgery

bouts of conjunctivitis. This results in scarring and in-growing eyelashes, known as trichiasis. The eyelids roll inwards and the eyelashes scratch the surface of the eye leading to blindness. Eyelid surgery that can be performed to correct this is only partially effective, as the trichiasis frequently returns.

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New hope for patients

In partnership with the Amhara Regional Health Bureau and The Carter Centre Trachoma Control Programme, Dr Burton's project is looking at strategies to improve treatment for patients and strengthen the training of health care workers and nurses. The project is being co-ordinated in Ethiopia by Dr Saul Rajak, a research fellow from the London School of Hygiene & Tropical Medicine.

Two ongoing randomised controlled trials, each with 1,300 participants, are assessing ways to improve the clinical management of trichiasis. The first trial is comparing the effect of different suture materials (silk and polyglactan) after surgery. The second is investigating whether immediate surgery or epilation (plucking eyelashes) is the best management regime for mild trichiasis.



UCL Institute of Ophthalmology's Professor Peng Khaw is also collaborating on this project.

"We're making real progress with this work, which we hope will have a truly significant impact on the lives of a great many people in Ethiopia."

Exciting new PhD Studentships

This year, four new Fight for Sight PhD Studentships have been awarded:

1. Professor Pete Coffey of UCL Institute of Ophthalmology will examine a cell therapy to restore the specialised light responsive cells responsible for high visual acuity and colour (cone photoreceptors). There have been recent advances in stem cell research and retinal transplantation. Professor Coffey's work focuses on developing stem cells to produce different retinal cells to transplant into the retina. This studentship will focus on deriving a supply of cone photoreceptors for transplantation.

2. Professor Alan Stitt of Queen's University Belfast will study a potential cause of age-related macular degeneration (AMD) progression. During ageing the retina is subject to accumulation of chemical adducts known as AGEs. The build-up of AGEs in retinal cells could cause the onset and progression of AMD. AGEs trigger harmful responses in cells by interacting with receptors known as RAGE. These interactions may provoke pro-inflammatory responses predisposing people to AMD. It is hoped that Professor Stitt's work will lead to a new therapeutic intervention for AMD in the foreseeable future.

3. Professor Shomi Bhattacharya of UCL Institute of Ophthalmology will conduct further research into retinitis pigmentosa (RP). The aim of the project is to understand more about a novel gene on chromosome 6 for autosomal recessive retinitis pigmentosa and to continue identifying new genes for recessive RP. It is important to identify as many as possible of the remaining RP genes in order to develop a better understanding of the disease process. This will eventually lead to the development of novel methods of treatment or for delaying the progression of retinal degeneration in patients with RP.

4. Professor Sarah Guthrie of King's College London will study how nerve fibres grow and branch and will see how the points of contact between nerves and muscles for the eye develop. Sometimes these nerves fail to grow or, branch incorrectly into the wrong muscles which can result in squint. This research will also consider the role of a human gene which clinicians have found is causal in a genetic form of squint, Duane Syndrome.

Clinical Fellowship - diabetic retinopathy

Fight for Sight has awarded a Clinical Fellowship to Miss Hannah Dunbar at the UCL Institute of Ophthalmology. Miss Dunbar's work will be supervised by Professor Gary Rubin.

Although the significant visual impairment caused by diabetes is well-documented, little research exists on visual rehabilitation for this growing patient group. Miss Dunbar's work will assess and quantify the effects of diabetic eye disease on vision. She will make a series of measures in addition to the standard letter chart measures currently used by clinicians. These traditional measures are not always representative of real world vision and relying solely on them can grossly underestimate the true visual impairment caused by diabetes.

Once she has examined and assessed the strains put on visual function and a person's vision disability, Miss Dunbar may well find that people with diabetes can maintain a good standard of vision on traditional tests,



Hannah Dunbar's research into visual disability in diabetic eye disease will identify the most appropriate time to offer rehabilitation to patients

yet actually have very poor visual function in terms of their everyday living requirements. If this proves to be the case, it will be necessary to update national referral criteria to ensure that people receive intervention from rehabilitation and low vision services at the most appropriate time.

"This should greatly benefit patients who currently may not be receiving help at the point when they really need it," said Miss Dunbar.

New Project Grants



Dr Hannah Kuper's research will identify the global need for diabetic retinopathy services

Dr Hannah Kuper of the London School of Hygiene & Tropical Medicine will lead a project to collate information on the burden of diabetic retinopathy which has blinded 1.8 million people worldwide. Lack of data makes the planning and monitoring of screening programmes particularly difficult. This project aims to collate available information and develop a model to estimate the prevalence of the condition for areas where surveys have not been conducted. A new survey methodology will be developed and this will be pilot tested in India, Mexico and Uganda. This project will provide planners with vital information enabling them to organise and monitor services in their region.

New Project Grants continued

Professor Graeme Black of the Manchester Royal Eye Hospital will undertake research into the identification of a gene that could lead to a better understanding of the cause of retinitis pigmentosa (RP). RP is a genetic condition affecting around 1 in 3,000 of the population. There are numerous types of RP which are caused by faults in different genes, many of which remain to be identified. Professor Black's project will identify a further molecular cause of RP and, once found, this knowledge will allow a better understanding of how the retina's health is maintained in normal individuals and why it becomes faulty in patients with RP.



Professor Graeme Black will study a gene that causes retinitis pigmentosa (RP)

Professor Roy Quinlan of Durham University will research the protein structures of lens cells, furthering understanding of age-related cataracts. Previous studies have demonstrated the importance of beaded filaments to the optical properties of the living lens, but very little is known about the life of these filaments in lens cells and how this is changed by either age or by cataract. Professor Quinlan's project will advance the understanding of the biological basis of the optical properties of the normal lens and offer a scientific explanation of cataract that could be used to treat age-related cataract and also perhaps help to design the next generation of multi-focal intraocular lenses.



Professor Roy Quinlan's work could lead to new treatments for age-related cataracts

Professor Shomi Bhattacharya of the UCL Institute of Ophthalmology will research hereditary retinal disease and retinitis pigmentosa (RP), a major cause of blindness in the western world. Families with mutations in the dominant RP gene show an interesting feature known as partial penetrance, where some individuals carrying the defective gene do not show any detectable signs of the disease, whereas others are severely affected. The project will investigate the molecular mechanism of this feature, providing an insight into regulation of gene expression, which may have wider implications for the human genome and, in due course, for better clinical management of patients.



Professor Shomi Bhattacharya will look into further defective genes that cause hereditary retinal disease

Professor Irene Gottlob at the University of Leicester will study nystagmus – the involuntary to and fro movements of the eyes that cause significant visual disability. It occurs in approximately 2.4 in 1,000 people. Currently, the mechanism of nystagmus is poorly understood and treatment is not available to most patients. Professor Gottlob and her team recently proved for the first time that two drugs can dampen nystagmus and improve visual function. This study involving 66 patients will find out which of the two drugs is more effective in different types of nystagmus. It is hoped that this study will help people with nystagmus to receive effective medication in the future.



Professor Irene Gottlob is hopeful that her study will lead to effective medication for people with nystagmus

Well run!



The College of Optometrists' Council running team who raised £2,500 for Fight for Sight

Kyle Smith successfully completed a 10k run in aid of Fight for Sight over the summer and will tackle the Run to the Beat Half Marathon in October. A big thank you to fellow participants Danny Daniel, Lee Edward, Lubna Hussain, Cynthia Langley and Denis Lincoln, and also to Scott Mackie, Tony Trowsdale, Kamlesh Gohill, Sanjay Patel and Jane Macnaughton from the College of Optometrists' Council. Their team was led by College Councillor for the West Midlands, Francesca Marchetti and they hope to raise almost £2,500. Commenting on their achievement Francesca said, *"This is the first College run we've organised, but it definitely won't be the last!"*

Triathlon heroes raise £6,000

Seven Fight for Sight supporters joined 13,000 participants at this year's London Triathlon held at Royal Victoria Dock. Competing in the biggest triathlon in the world on behalf of Fight for Sight were Ben Cannon, Oliver Comyn, Stephen Dagless, Michael Goodall, Yvonne Laridon, Marc Seligmann and Alec Snow. Despite heavy rain and wind, they swam, cycled and ran their way to the finish with determination and enthusiasm. Over 50,000 watched this year's event.

Thanks to their commitment and the generosity of their families and friends, a total of £6,000 was raised for Fight for Sight.



Alec Snow (wearing medal) with family and friends after completing the triathlon

Nicely played!

A Golf Day at Stoneleigh Deer Park in Warwickshire raised more than £15,000 for Fight for Sight. In its 13th year, the event is organised by Mr Clive Stone, Chairman of Fight for Sight's Warwickshire Committee and Vice President of the charity. The Committee has helped to raise more than £200,000 so far.

In total, 140 players took part including teams from the optical profession, as well as Fight for Sight supporters.

Clive Stone said, *"It's incredible that despite the economic gloom around at the moment we had so much support for the event. We would like to thank John and Cherry Reay for allowing us to use the course at Stoneleigh and for providing team prizes."*



The Portland Optical team – deserving winners of the Fight for Sight Cup

Mike braves the ocean waves for Fight for Sight

What inspires a man to take to sea in a 19ft boat for three months and sail 1,500 nautical miles around Britain? In Colonel Mike Brooke's case, his inspiration is his godson Theo. In July, Mike set off from Bosham Quay in West Sussex in his boat 'Theo's future' to raise £27,500 for gene-screening equipment.

The good news is that thanks to the enthusiasm, commitment and generosity of everyone involved in this exciting project, the target has now been reached!

For researchers at the UCL Institute of Ophthalmology London and Moorfields Eye Hospital, the equipment is absolutely vital to their work into gene therapy to treat people with Leber's congenital amaurosis (LCA). Theo, who is not yet two, was born with the condition and is now blind. There is currently no cure.

But in April the researchers announced encouraging results from the world's first clinical trial to test a gene therapy treatment for LCA. It proved that the experimental treatment is safe and can improve sight, offering real hope of finding a cure.

"The recent breakthrough in gene therapy to treat LCA is very exciting news, but a lot more



works needs to be done before gene therapy will be available to treat Theo."

As Mike continues his journey round the British Isles, funds raised over the target will be devoted to research that could bring possible treatment for this congenital condition closer.

Annu Mayor, Director of Fundraising at Fight for Sight said, *"Mike's mission to raise funds will help not only Theo but could offer hope to other children with LCA all over the country. He is doing an incredible job."*

Forget tea leaves, a fortune lies in coffee!

Dot Grindley knows all about sight loss. Her grandson, Tommy Salisbury, 8, is losing his sight to choroideremia, a rare inherited eye condition for which there is currently no cure. But Dot, whose father also had the condition, is not one to give in without a fight. She got together with Tommy's Mum, Emma, to organise an annual coffee morning. Now four years on and the family have just raised £2,000 making an amazing total of £100,000 raised so far! This money is helping to fund important gene therapy research at Imperial College London, which scientists hope may lead to a cure for Tommy and the thousands of other people affected by inherited retinal disease.



Emma Salisbury, left, and Dot Grindley toast their family's success at raising a phenomenal £100,000 in aid of Fight for Sight

Bath Committee come up trumps again



'Lady Margaret' opens the Bath Committee's 15th Annual Summer Garden Party with help from Eric Snook and Michèle Acton

In August, the fifteenth annual summer garden party took place at the Midford home of Bath Committee Chairman, Eric Snook. Guests, undeterred by the rain, danced to music by Devizes-based big band 'Sound and Company' and enjoyed their picnics in the garden.

Eric Snook, Bath Committee Chairman, said, *"Thanks to the support of our guests, we raised £2,000 for Fight for Sight and were really pleased to welcome Michèle Acton, Fight for Sight's Chief Executive. Our thanks go to the generous people who donated the splendid raffle prizes."*

Golden wedding present for Fight for Sight

When friends and family asked Brian and Joyce Taylor of Belper, Derbyshire, what presents they would like for their golden wedding anniversary, they replied, *"A donation to Fight for Sight, please"*.

Brian Taylor has acute glaucoma and he and Joyce were keen to do something that could benefit others in the future, rather than receive a large number of gifts they both felt they did not need.

Thanks to their thoughtful gesture and the generosity of their friends and family, Fight for Sight was delighted to receive a donation of £600 after Gift Aid – to support research into the prevention and treatment of blindness and eye disease.

The anniversary was marked by a party for around fifty family and friends, including Mr and Mrs Taylor's three children, six grandchildren and all four of the bridesmaids from their wedding fifty years ago. Our heartfelt thanks go to Brian and Joyce, as well as many congratulations and very best wishes on this special occasion.



Brian and Joyce Taylor celebrated their golden wedding anniversary by asking friends and families to give to Fight for Sight

2008/09 Events Diary

We're always on the look-out for keen event participants, so if you like a challenge and want to have fun whilst raising funds for a vital cause, then call Rowena on 020 7929 7755 or email events@fightforsight.org.uk

September	19	Golf Day for choroideremia research at Headingley Golf Club, Leeds
October	02	Annual Autumn Fair, Wiltshire Committee, Warminster, Wiltshire
	05	Run to the Beat Half Marathon, London
	12	Royal Parks Half Marathon, London
November	02	ING New York Marathon
	08	Emma Salisbury's Gala Dinner for choroideremia research, Shooters Hill Golf Club, London
February	19	Emma Salisbury's Disco for choroideremia research, Welling, Kent
	20	Cycle from Vietnam to Cambodia
March	02	Asics Reading Half Marathon, Reading
	08	adidas Half Marathon, Silverstone

Good luck to Run to the Beat participants

Twenty-five runners, including five from BBC Radio 5 Live, will run London's first ever half marathon on 5 October 2008, in aid of Fight for Sight. With 12,000 people expected to take part, the event promises to be truly memorable. The route begins and ends at the O₂ Arena and will take runners through the streets of Greenwich. Live music, from 16 separate band stations at the O₂ Arena will be scientifically selected and played throughout the course to boost the runners' performance.



Celebrations after the London Flora Marathon 2008

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